Exhibit A
U.S. Application No. 09/328,296
Attorney Docket No. 9632-005
Marked Up Copy of Amended Claims

1. (Twice amended) A molecule comprising SEQ ID NO:8, SEQ ID NO:9, [or] and SEQ ID NO:10, which molecule (a) binds CD40, and (b) comprises [one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110] a human immunoglobulin constant domain.

4. (Amended) [The molecule of claim 1 which] A molecule comprising SEQ ID NO:8, SEQ ID NO:9, and SEQ ID NO:10, which molecule (a) binds CD40, and (b) is a fusion protein comprising the amino acid sequence of a second molecule that is not an antibody.

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6. (Amended) The molecule of claim 1 which is an antibody comprising a variable domain of monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, and a human immunoglobulin constant region.

8. (Twice amended) A protein comprising an amino acid sequence that has at least 95% identity to SEQ ID NO:7 as determined by use of the BLASTp computer program, which protein (a) binds CD40; and (b) comprises [one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110] a human immunoglobulin constant domain.

9. (Twice amended) A protein, which protein (a) competes for binding to CD40 with monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, (b) increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%, and (c) comprises [one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the

hybridoma deposited with the ATCC and assigned accession number PTA-110] a human immunoglobulin constant domain.

21. (Twice amended) A pharmaceutical composition comprising:

(a) a molecule comprising SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, or SEQ ID NO:10, which molecule (i) binds CD40, (ii) increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%, and (iii) comprises [one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110] a human immunoglobulin constant domain, in an amount effective for the treatment or prevention of cancer; and

(b) a pharmaceutically acceptable carrier.

22. (Twice amended) A pharmaceutical composition comprising:

(a) a protein, which protein (i) competes for binding to CD40 with monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, (ii) increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%, and (iii) comprises [one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110] a human immunoglobulin constant domain, in an amount effective for the treatment or prevention of cancer; and

(b) a pharmaceutically acceptable carrier.

23. (Twice amended) A pharmaceutical composition comprising:

(a) a molecule comprising SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, or SEQ ID NO:10, which molecule (i) binds CD40, (ii) increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%, and (iii) comprises [one

or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110] a human immunoglobulin constant domain, in an amount effective for activating or augmenting an immune response; and

(b) a pharmaceutically acceptable carrier.

24. (Twice amended) A pharmaceutical composition comprising:

(a) a protein, which protein (i) competes for binding to CD40 with monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, (ii) increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%, and (iii) comprises [one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110] a human immunoglobulin constant domain, in an amount effective for activating or augmenting an immune response; and

(b) a pharmaceutically acceptable carrier.

36. (Twice amended) A pharmaceutical composition comprising in an amount effective for the treatment or prevention of cancer or an immune disorder, or for activating or augmenting an immune response: (a) a molecule that binds CD40, which molecule increases the binding of CD40 ligand to cell surface CD40 on B cells; (b) CD40 ligand; and (c) a pharmaceutically acceptable carrier.

44. (Amended) A protein comprising an amino acid sequence that [has] comprises regions having at least 80% identity to SEQ ID NO:8, SEQ ID NO:9 and SEQ ID NO:10, respectively, as determined by use of the BLASTp computer program, which protein (a) binds CD40; and (b) comprises [one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited

with the ATCC and assigned accession number PTA-110] a human immunoglobulin constant domain.

47. (Amended) The molecule of claim 1, 2, 3, 4, 5, or 6, which increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%.

48. (Amended) The molecule of claim 1, 2, 3, 4, 5, or 6, which increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 50%.

49. (Amended) The molecule of claim 1, 2, 3, 4, 5, or 6, which increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 60%.

50. (Amended) The molecule of claim 1, 2, 3, 4, 5, or 6, which increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 65%.

51. (Amended) The protein of claim 8, which increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%.

52. (Amended) The protein of claim 8 or 9, which increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 50%.

53. (Amended) The protein of claim 8 or 9, which increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 60%.

54. (Amended) The protein of claim 8 or 9, which increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 65%.

57. (Amended) The protein of claim 8, 9, or 44[, 45, or 46,] which is purified.